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UNITED STATES DEPARTMENT OF AGRICULTURE

U.S. BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE,

2a Division of Japanese Beetle Control //

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3 REPORTS FROM GROWERS OF EFFECT ON PLANTS OF METHYL BROMIDE
FUMIGATION FOR JAPANESE BEETLE CONTROL //

Since the start of methyl bromide fumigation for compliance with the regulations of the Japanese beetle quarantine in February of 1939, some 2,000,000 plants of almost 3,000 varieties have been treated commercially. Thirty-five establishments have constructed fumigation chambers and at least 61 firms have fumigated and shipped plants.

In the fall of 1940, the owner of every fumigation chamber used for Japanese beetle quarantine treating was solicited for information on plant injury by the Japanese beetle control project. Up to March 15, 1941, more or less complete returns had been received from 27 firms. The injury reported is based both on complaints from purchasers and, in a few cases, on the results from experimental fumigations conducted by the concerns reporting.

The appended list, in the main, includes plants fumigated to July 1, 1940, together with later additions supplied by reporting growers. All reports of injury are included. For each variety a single report from each grower is given.

In the body of the list, growers' comments are included for many varieties. From these, as well as from verbal reports, several factors appearing to influence injury have been observed. For some plant varieties, fumigation is safe during dormancy, whereas injury is apt to occur if the plants are in active growth. On the other hand, many other varieties can tolerate treatment during any stage, and others apparently are injured regardless of growth conditions. The belief is often expressed that top injury results from excessive air movement during fumigation.

In the list, the first column records the number of establishments reporting which have fumigated the plant shown. The second column records the number from which no report of injury has been received. The third column is a record of the number of establishments from which injury has been reported. The figures in parentheses following the plant name show the number of plants known to have been fumigated. Where no number is shown, the quantity treated has not been ascertained. The remarks included, largely, are direct quotations from growers' reports and in all cases represent information supplied by growers. The list as prepared consists solely of reports from growers based on their experience. The plant names listed are those supplied by growers. It has not been possible to thoroughly check these for accuracy. They are the ones, however, which are in general use in the trade and as such should be easily recognized. The quantities listed are those known to have been fumigated prior to July 1, 1940 supplemented somewhat by later records furnished by individual growers. Records appear for 2,024 varieties. One or more reports were received indicating injuries to 195, or 9.6% of this total.

REPORTS FROM GROWERS ON INJURY TO PLANTS RESULTING FROM METHYL BROMIDE FUMIGATION FOR JAPANESE BEETLE CONTROL

	I	II	III	COMMENTS		I	II	III	COMMENTS
ABELIA					AMPELOPSIS (6)	2	2	0	One grower notes "slight damage to growing <u>Ampelopsis</u> ."
grandiflora	1	0	1		aconitifolia (2)	1	1	0	
schumani	1	0	1		heterophylla (50)	1	1	0	
ABIES					lowi (50)	1	1	0	
cephalonica (3)	1	1	0		quinquefolia (250)	2	2	0	
cilicica (3)	1	1	0		veitchi (9)	2	2	0	
concolor (966)	3	2	1		AMSONIA (20)	1	1	0	
fraseri (252)	1	1	0		AMYGDALUS				
pectinata (250)	2	2	0		persica Rochester (2)	1	1	0	
veitchi (3)	1	1	0		ANCHUSA (135)	2	2	0	
ACER				One grower reported that injury to	italica (Dropmore) (4)	3	3	0	
palmatum (7)	3	3	0	ACER CONSISTED OF	morning glory (4)	1	1	0	
-- atropurpureum (655)	6	4	2	slight leaf damage	myosotidiflora (300)	4	4	0	
-- novum (520)	1	0	1	& final recovery.	ANTHEMIS	1	1	0	
-- dissectum	1	1	0		moonlight	4	4	0	
-- rubrum (501)	1	0	1		Perry's var. (12)	3	3	0	
ACHILLEA (219)	4	4	0		ANTHURIUM				ANTHURIUM: "Foliage burned severely."
millefolium (10)	2	2	0		spathiphyllum (1)	1	0	1	
Pearl (51)	5	5	0		AQUILEGIA (577)	3	3	0	
ptarmica (Boule de Neige) (3)	2	2	0		blue	2	2	0	For AQUILEGIA one grower notes: "not very good in summer."
tomentosa (154)	3	3	0		caerulea (13)	1	1	0	
ACONITUM (34)	1	1	0		chrysantha (13)	1	1	0	
fischeri (8)	2	2	0		clematiflora (16)	1	1	0	
napellus (9)	2	2	0		Crimson Queen (3)	1	1	0	
wilsoni (6)	2	2	0		Crimson Star (25)	1	1	0	
ACTINIDIA					Emp. Longspur (18)	1	1	0	
arguta (101)	2	2	0		longissima (28)	1	1	0	
ADIANTUM					L. S. Blue (3)	2	2	0	
cuneatum (157)	2	2	0		L. S. Pink (3)	2	2	0	
AETHIONEMA	1	1	0		L. S. Hybrid Pink	2	2	0	
persicum (1)	1	1	0		matchless hybrid (3)	1	1	0	
Warley Rose (7)	3	3	0		Michell's L.S. Hybrid (6)	1	1	0	
AGAPANTHUS (29)	1	1	0		mixed (12)	1	1	0	
umbellatus (12)	1	1	0		Rose Queen	2	2	0	
AGERATUM (33)	1	1	0		Scott Elliot (24)	1	1	0	
eupatorium coelestium (6)	2	1	1		Mrs. Scott Elliot hyb. (24)	2	2	0	
AGROSTEMMA (175)	1	1	0		ARABIS (116)	2	2	0	
AJUGA (9)	2	1	1	Ajuga injury noted	alpina (934)	4	4	0	
genevensis (6)	1	1	0	as "slight".	-- Fl. pl. (195)	3	3	0	
-- rosea (5)	1	1	0		rosebella	4	4	0	
reptans (15)	2	2	0		ARALIA				
AKEBIA					dentaphylla (10)	1	1	0	
quinata (100)	1	1	0		ARAUCARIA				ARAUCARIA: "Needles burned at top."
ALLAMANDA					excelsa (184)	2	0	2	
hendersoni (6)	1	1	0		ARENARIA				
ALOE					verna caespitosa (3)	1	1	0	
humilis (6)	1	1	0		ARMERIA (see STATICE)				
ALYSSUM (248)	3	3	0		ARONIA				
Golden Tuft (56)	1	1	0		melanocarpa (500)	1	1	0	
saxatile (10)	2	2	0		ARTEMESIA (93)	3	3	0	
-- compacta (1547)	4	4	0		dracunculus (3)	1	1	0	
AMARYLLIS (58)	1	0	1		Silver King (4)	2	2	0	
					ASPARAGUS				
					Martha Washington (200)	1	1	0	
					plumosa (3)	1	1	1	

Column I = Number of establishments reporting.

Column II = Number of establishments at which treatment is not reported as causing injury.

Column III = Number of establishments reporting injury.

	I	II	III	COMMENTS
ASPERULA odorata (3)	1	0	1	
ASTER (805)	2	1	1	
Alderman Jolkes	1	1	0	
alpinus (5)	1	1	0	
amellus (Perry's variety) (3)	1	1	0	
-- (Region) (1)	1	1	0	
Barr's Pink (21)	5	5	0	
Beechwood Challenger (5)	3	3	0	
Blue Bouquet (2)	2	2	0	
Blue Eyes (8)	1	1	0	
Burbank Charming (1)	1	1	0	
Charles Wilson (1)	1	1	0	
Countess of Dudley (5)	2	2	0	
Daphne (5)	1	1	0	
Dorothy Vakes (3)	1	1	0	
dumosa (Dwarf Hybrid) (3)	0	0	1	
frikarti (2521)	5	5	1	
-- wonder of Staefa (25)	4	4	2	
Harrington Pink (13)	1	1	0	
hybrid (Fall) (30)	1	1	0	
hybridus luteus (12)	3	3	0	
Lady H. Maddock (3)	1	1	0	
Mammoth Cushion (6)	1	1	0	
Mauve Cushion (2)	1	1	0	
Mount Everest (4)	2	2	0	
Mount Ranier (15)	2	2	0	
Nancy (6)	0	0	1	
Niobe (18)	2	2	1	
nova belgi (Blue Gem) (8)	1	1	0	
Olga Keith (1)	1	1	0	
Pink Nymph (2)	1	1	0	
Red Rover (9)	3	3	0	
Ronald (3)	0	0	1	
Skylands Queen (39)	4	4	0	
Star of Wartburg (171)	2	2	0	
Strawberries & Cream (3)	2	2	0	
subcaeruleus (4)	1	1	0	
-- Dark Beauty (9)	1	1	0	
victor (9)	2	2	0	
White Climax	1	1	0	
ASTILBE (See SPIRAEA)				
AUBRIETIA (1)	1	1	0	
frigida (10)	1	1	0	
large flowering (20)	2	2	0	
new hybrid (10)	1	1	0	
AUCUBA (1085)	2	2	0	
crontonifolia (2)	2	2	0	
japonica (3)	2	2	0	
-- variegata (2)	2	2	0	
variegata (15)	2	2	0	
AZALEA (179)	2	2	0	
adversaire (1)	1	1	0	
Aida (14)	2	2	0	
*Alaska (380)	2	2	0	
alba perfecta (2)	1	1	0	
Albert & Elizabeth (1647)	3	3	0	
*albion (212)	2	2	0	
*Alice Muller (214)	2	2	0	
Altaclare (1019)	2	2	0	
amoena (313)	2	2	0	
-- coccinea (110)	2	2	0	
Apple Blossom (68)	1	1	0	
arborescens (5)	1	1	0	
Ariadne (1)	1	1	0	
arnoldiana (56)	1	1	0	
atlantica (130)	2	2	0	
avalanche (7)	2	2	0	
*A. W. Muller (25)	2	2	0	
Beaute Celeste (3)	1	1	0	
Benigiri (150)	2	2	0	
Betty (100)	1	1	0	
Bijou de Gendbrugge (3)	1	1	0	
Blueberry (10)	1	1	0	
Blushing Bride (34)	1	1	0	
Bouquet de Flora (3)	1	1	0	
Bouquet Rose (5)	1	1	0	
Briarcliff (20)	1	1	0	
Bridesmaid (5)	2	2	0	
Brilliant (98)	2	2	0	
calendulacea (62)	2	2	0	
canadensis (5)	1	1	0	
Carmen (127)	2	2	0	
Carmine Prince (5)	4	4	0	
Chas Encke (917)	4	4	0	
*Cherry Blossom (26)	1	1	0	
China Seas (88)	1	1	0	
chinensis (500)	2	2	0	
Christmas Cheer	2	2	0	
Christmas Red (27)	1	1	0	
Christmas Star (92)	1	1	0	
Christmas Type (50)	1	1	0	
Cleopatra (109)	1	1	0	
coccinea speciosa (2)	1	1	0	
Colorado (99)	1	1	0	
*Constance (53)	1	1	0	
Coral Bells (510)	5	5	0	
Crimson Glory (81)	1	1	0	
Crimson Glow (223)	1	1	0	
Dame Melanie (1)	1	1	0	
Davies (2)	1	1	0	
Daybreak (51)	2	2	0	
Delight (15)	1	1	0	
Dexters Pink (25)	1	1	0	
dilatatum	1	1	0	
*Dorothy Gish (214)	1	1	0	
Dr. Charles Bauman (2)	1	1	0	
Dr. Martin (2)	1	1	0	
Dr. Moore (1)	1	1	0	
Early Morn	1	1	0	
Eclairer (862)	2	2	0	

One grower notes
that all of the
ASTERS he treated
successfully were
dormant.

AUCUBA: "foliage
will burn at a
temperature above
70°F."

The AZALEAS marked
with an asterisk
have been reported
as occasionally
slightly injured.
One grower feels
that much of this
can be avoided in
fall treating by
delaying fumiga-
tion until after
October 1. Another
possible factor
contributing to in-
jury may be drop-
pings of water on
the leaves and in
the leaf axils. At
another establish-
ment, injury is
much more common at
temperatures above
70° F. then at lower
temperatures

	I	II	III	COMMENTS
AZALEA (Continued)				
Empereur du Bresil (1)	1	1	0	
Empress of India (932)	4	4	0	
Ernest von Eeckhowtte (82)	3	3	0	
Ernest Thiers (394)	3	3	0	
Exquisite (50)	2	2	0	
Fairy (6)	1	1	0	
Fanny (1)	1	1	0	
Flame	1	1	0	
Fedora (197)	3	3	0	
*Firefly (1)	1	1	0	
*Firelight (666)	1	1	0	
F. L. Atkins (10)	1	1	0	
*Fred Sanders (640)	3	3	0	
Freida Haerens (2)	1	1	0	
General Trauff (1)	1	1	0	
Glory (64)	1	1	0	
Glory K10 (4)	1	1	0	
Goldsworth Red (36)	1	1	0	
Governor	1	1	0	
Gd. Duc. Luxemburg (2)	1	1	0	
Haerensiana (1)	1	1	0	
Hardy Firefly (9)	1	1	0	
Helene Thielman (29)	1	1	0	
Hexe (4958)	6	6	0	
Hinamayo (20)	3	3	0	
Hortense (30)	3	3	0	
hybrid (pontica) (525)	1	1	0	
Il. Tasso (1)	1	1	0	
Indian Chief (38)	1	1	0	
Indica (assorted) (160)	2	2	0	
J. C. Van Tol (1025)	3	3	0	
Jean Haerens (4174)	3	3	0	
Jean Peters (140)	2	2	0	
Jean Vervaene (15)	1	1	0	
Josephine Klinger (2)	5	5	0	
kaempferi (28)	1	1	0	
--hybrid (numbered var.) (488)	2	2	0	
Kathleen	1	1	0	
Kinnazoi (50)	2	2	0	
kurume (10)	1	1	0	
--hinodegiri (16026)	9	9	0	
Lady Roosevelt (2)	2	2	0	
Lakme	2	2	0	
La Temperance	1	1	0	
Lavender Queen (1)	1	1	0	
ledifolia alba (148)	4	4	0	
-- rosea (7)	2	2	0	
*L. J. Bobbink (47)	1	1	0	
Lohengrin (5)	1	1	0	
Lorraine (754)	4	4	0	
Louise (15)	1	1	0	
Macrantha (58)	3	3	0	
Mme. Aug. Van Damme (1)	1	1	0	
Mme. Herman Seidel (2)	1	1	0	
Mme. J. Vervaeke (661)	2	2	0	
Mme. Morreaux (422)	2	2	0	
*Mme. Petrick (7280)	2	2	0	
*Mme. Petrick Superba (537)	3	3	0	
Mme. Romain de Smet (10)	4	4	0	
Mme. van der Cruyssen (5192)	4	4	0	
magnifica (23)	1	1	0	
Marie Louise (86)	1	1	0	
Martha (88)	2	2	0	
Mary Corcoran (85)	1	1	0	
Mauve Beauty (160)	2	2	0	
Maxwelli (7)	3	3	0	
Maxwelli alba (52)	2	2	0	
Melame (1)	1	1	0	
Mellow Glow	1	1	0	
Memoire de Louis Vanhoutte (114) 2	2	2	0	
Mignon (10)	1	1	0	
Mikado (72)	1	1	0	
Wilton (1)	1	1	0	
Mollis (1604)	4	4	0	
Mons. Millard (20)	2	2	0	
Mont Blanc (10)	2	2	0	
Morning Glow (10)	1	1	0	
Morrens (5)	1	1	0	
Mossicana (11)	1	1	0	
*Mother of Pearl (40)	2	2	0	
*Mrs. A. W. Muller (53)	1	1	0	
Mucronulata (4)	2	2	0	
Nancy Waterer (2)	1	1	0	
Narcissiflora (3)	1	1	0	
Niobe (1105)	4	4	0	
Norma (5)	1	1	0	
nudiflora (4)	2	2	0	
Oberon (20)	1	1	0	
Orange Beauty (17)	1	1	0	
Orange King (413)	1	1	0	
*Orange Queen (24)	2	2	0	
Othello (176)	4	4	0	
Paul Schame (30994)	4	4	0	
Paul Weber (20)	2	2	0	
Peach Blow (77)	2	2	0	
Pearl de Sideberg (2)	1	1	0	
pericat (mixed) (34)	1	1	0	
Perle de Ledeburg (1)	1	1	0	
Phidias (5)	1	1	0	
*Pink Beauty (27)	1	1	0	
Pink Lady (1)	4	4	0	
Pink Pearl (2250)	1	1	0	
Pink Perfection (19)	1	1	0	
*Pink Ruffles (165)	1	1	0	
Pocahontas (41)	1	1	0	
pontica (1001)	2	2	0	
-- coccinea (1)	1	1	0	
poukhanensis	1	1	0	
Praxiteles (1)	1	1	0	
Princess Marie Jose (8)	1	1	0	
Pres. Oswald de Kerckhove (82)	2	2	0	
*Prof. Wolters (519)	1	1	0	
Purity (682)	1	1	0	
Raphael (24)	2	2	0	
Raphael de Smet (3)	1	1	0	

	I	II	III	COMMENTS		I	II	III	COMMENTS
AZALEA (Continued)					CALCEOLARIA				
Rebeira (1)	1	1	0		multiflora nana (43)	1	1	0	
Rhapsody (25)	1	1	0		CALLUNA (22)	2	2	0	
Rhombica (3)	1	1	0		menziesii (1)	1	1	0	
Romaine de Smet (189)	1	1	0		CALYCANTHUS				
*Rose Queen (477)	1	1	0		floridus (110)	2	2	0	
Rose Queen Imp. (3)	1	1	0		CAMELLIA				
Rustica aida (1)	1	1	0		Pink (10)	1	1	0	
Rutherford Glory (5)	1	1	0		Red (10)	1	1	0	
Rutherfordiana (50)	1	1	0		CAMPANULA (327)	1	1	0	
Rutherford mixed (20)	1	1	0		Blue Gardenia	2	2	0	
Rutherford snow bank (6)	1	1	0		calycanthema (10)	2	2	0	
Sakuntala (1)	1	1	0		carpatia (333)	2	2	0	
Salmon Beauty (7)	4	0	4		-- alba (27)	3	3	0	
Salmon Glow (61)	1	1	0		Cup-and-Saucer Blue (10)	1	1	0	
Salmon Joy (1)	1	1	0		Cup-and-Saucer Pink (15)	1	1	0	
Salmon Perfection (30)	1	1	0		Garganica (10)	1	1	0	
Salmon Prince (15)	1	1	0		glomerata (27)	1	1	0	
Salmon Queen (24)	1	1	0		-- acaulis (5)	1	0	1	
Sang de Gandbrugge (3)	1	1	0		lactiflora (10)	1	0	1	
Schlippenbachi (220)	3	3	0		medium (60)	1	1	0	
Schryveriana (124)	2	2	0		medium blue (498)	2	2	0	
Sherwoodi (255)	1	1	0		medium rose (494)	2	2	0	
Simon Hardner (620)	4	4	0		medium white (500)	2	2	0	
Snow (4393)	7	5	2		miranda (4)	2	1	1	
Snowbank (188)	2	2	0		persicifolia (5)	3	3	1	
Snow Queen (38)	1	1	0		-- humosa (4)	3	3	1	
Spit Fire (1)	1	1	0		persifolia Telham Beauty (43)	2	2	0	
Sunset (159)	1	1	0		pyramidalis (13)	2	2	0	
Sunstar (23)	2	2	0		rotundifolia (5)	2	1	1	
Sweet Briar	2	2	0		trachelium (8)	1	0	1	
Temperance (125)	1	1	0		CANNA				
Theo. Reimers (7)	2	2	0		Commander Byrd (250)	1	1	0	
Triumph (2629)	4	4	0	Triumph: "Damaged at 55°F schedule" (2 1/2 lbs for 4 hours)	Mrs. Alfred Conrad (100)	1	1	0	
Twenty Grand (205)	1	0	2	"OK at 63°F schedule" (2 1/2 lbs for 2 1/2 hrs.)	Yellow King Humbert (197)	1	1	0	
Unique (1)	1	1	0		CARYOPTERIS				
Valentine flowering (50)	1	1	0		incana (12)	1	1	0	
vaseyi (48)	4	4	0		CEDRUS				
vervaeneana (2462)	4	4	0		atlantica glauca (25)	2	2	0	
-- alba (259)	3	3	0		CELASTRUS				
vesuvius (12)	3	3	0		scandens (350)	1	1	0	
viscosa (3)	2	2	0		CENTAUREA				
White (3)	1	1	0		macrocephala	1	0	1	
White Swan (6)	1	1	0		montana (33)	1	1	0	
William III (1)	1	1	0		-- blue (251)	1	1	0	
Winifred Haerens (75)	1	1	0		CERASTIUM				
Winifred Raechler (10)	1	1	0		tomentosum (6)	1	1	0	
Yayegiri (55)	2	2	0		CERCIS				
yodogawa (209)	3	3	0		canadensis (12)	2	2	0	
Yuletide (90)	1	1	0		CEREUS				
Zampa (201)	1	1	0		peruvianus (220)	1	1	0	
BAPTISIA					CHAMAECYPARIS				
australis (4)	1	1	0		filifera (250)	3	3	0	
BEGONIA					lawsoniana (2)	1	1	0	
Lady Mac (75)	1	1	0		loveti (78)	1	1	0	
Lucille (318)	2	2	0		obtus. compacta	2	2	0	
Marjory Gibbs (43)	1	1	0		-- crispis (28)	2	2	0	
Mellor (81)	1	1	0		-- gracilis (12)	2	2	0	
Rex (278)	1	1	0		-- nana	2	2	0	
Turnfork Hall (21)	1	1	0		pisifera (125)	2	2	0	
BELLIS					-- aurea (4)	1	1	0	
perennis (23)	1	1	0		-- ax. (2)	1	1	0	
BERBERIS					-- nana (1)	1	1	0	
julianae (27)	2	1	1		-- plumosa	3	3	0	
thunbergi (2325)	2	2	0		plumosa (253)	4	4	0	
-- atropurpurea (31410)	2	2	0		-- aurea (354)	4	3	1	
verruculosa (298)	2	2	0		squarrosa (200)	2	2	0	
BETULA					-- veitchi (2)	1	1	0	
lutea (25)	1	1	0		veitchi (2)	1	1	0	
BIGNONIA (251)	2	2	0		CHEIRANTHUS (28)	3	2	1	
Eme Galen (351)	2	2	0		altioni	1	1	0	
radicans (3)	2	2	0	BIGNONIA: "C.K. dormant." No other comment received.	siberian (18)	1	1	0	
BILBERGIA					CHIONANTHUS				
nutans (1)	1	0	1		virginica (275)	1	1	0	
BIOTA (see THUJA)					CHIVE (254)	2	2	0	
BOLTONIA					CHRYSANTHEMUM (1333)	4	3	1	
asteroides (7)	1	1	0		Aladdin (31)	2	0	2	
BOUWARDIA (1084)	1	1	0		Amelia (17)	3	1	2	
humboldtii (335)	1	1	0		Apollo (12)	1	0	1	
Pink (187)	1	1	0		arcticum (8)	2	0	2	
BUDDLEIA (173)	1	1	0		arcturus (12)	1	1	0	
asiatica (27)	1	1	0		astrid (54)	3	1	2	
charming (103)	1	1	0		bronze (140)	1	1	0	
David Magnificent (25)	1	1	0		Bronze Beauty (5)	2	2	0	
Dubonnet (843)	2	2	0		Bronze Cushion	2	0	2	
Farquhari	1	1	0		caliph (12)	2	1	1	
Ille de France	3	3	0		Cheerfulness (25)	1	0	1	
magnifica gigantea (7)	1	1	0		Chestnut Burr (250)	1	1	0	
Orchid Beauty	1	1	0		Chiffon (4)	2	2	0	
Pink Charming (689)	3	2	1		Clara Butt (24)	1	1	0	
BUXUS					Coccineum - Pink (30)	1	1	0	
dwarf (suffruticosa) (1)	1	1	0		Coccineum - Red (30)	1	1	0	
English (1004)	1	1	0		Cydonia (20)	1	0	1	
Ille de France (793)	1	1	0		daphne (32)	1	0	1	
japonica (350)	2	2	0		Early Bronze (156)	3	2	1	
sempervirens (10)	1	1	0		Ember (20)	1	1	0	
CACTUS (12)	1	1	0		Gladys Pearson (125)	1	1	0	
CALADIUM									
candidum (2)	1	1	0						

	I	II	III	COMMENTS		I	II	III	COMMENTS
DELPHINIUM (Continued)					DRACAENA				
Devine (1)	1	0	1		fragrans (20)	1	0	1	
Edward Bromet (1)	1	1	0		indivisa (15)	1	0	1	
Galahad (2497)	1	1	0		massangeana (43)	2	2	0	
Giant White (3)	1	0	1		Mme. Eugene Andre (20)	1	1	0	
Gold Medal (75)	1	1	0		ECHEVERIA				
Grandiflora Cambridge Blue (12)	1	1	0		tectorum (730)	1	1	0	
Guinevere (974)	1	1	0		ECHINOPS				
hollyhock (45)	1	1	0		ritro	1	0	1	
Intermedia (6)	1	1	0		ELEAGNUS				
King Arthur (814)	1	1	0		angustifolia (10)	1	1	0	
Lamartine (9)	1	0	1		pungens reflexa (2)	1	1	0	
Lancelot (680)	1	1	0		EPIMEDIUM (575)	1	1	0	
Light Blue (1)	1	1	0		macranthum (11)	1	1	0	
Mauve Dark Eye (1)	1	1	0		-- noveum (552)	1	1	0	
Mixed (99)	2	2	0		musschianum (320)	1	1	0	
Mrs. Norman Holden (1)	1	1	0		perracerdanum (1)	1	1	0	
Mrs. Shirley (1)	1	1	0		pinnatum elegans (6)	1	1	0	
Paramount hybrid (12)	1	1	0		rubrum (3)	1	1	0	
Pink sensation (17)	1	1	0		sulphureum (1087)	1	1	0	
Summer Skies (2162)	1	1	0		violaceum (1)	1	1	0	
The Bishop (1)	1	1	0		ERICA				
The Shah (1)	1	1	0		carnea (12)	2	2	0	
Tower Of Snow (21)	1	1	0		mediterranea (5)	3	3	0	
Watkins Samuels hybrids (19)	1	1	0		melanthera (312)	2	2	0	
Watkins Samuels selected (55)	1	1	0		tetralix (5)	2	2	0	
Watkins Samuels Wrexham (45)	2	1	1		ERIGERON				
DEUTZIA (82)	1	1	0		Azure Beauty (12)	3	3	0	
gracilis (1150)	2	2	0		Mesagrande (10)	2	2	0	
Iemoine (50)	1	1	0		speciosus (4)	2	2	0	
Pride of Rochester (40)	1	1	0		ERODIUM				
scabra crenata (15)	1	1	0		chamaedryoides roseum (11)	2	2	0	
DIANTHUS	1	1	0		EUONYMUS (1401)	3	3	0	
Annie Laurie (6)	2	2	0		alatus (871)	1	1	0	
barbatus (695)	2	2	0		coloratus (3563)	2	2	0	
-- alba (212)	2	2	0		radicans (444)	2	2	0	
-- giant white (6)	2	2	0		variegated (895)	2	2	0	
-- pink beauty (515)	2	2	0		vegetus (36)	2	2	0	
-- scarlet beauty (395)	2	2	0		EUPATORIUM (232)	1	1	0	
Beatrix	2	2	0		coelestinum	2	2	0	
Bismarck	2	2	0		EUPHORBIA (59)	1	1	0	
Bristol Jewel (316)	2	2	0		jacquelineflora	2	1	1	EUPHORBIA: Reported by one grower as "killed."
Bristol Maid (1)	1	1	0		EXOCHORDA				
Bristol Purity (302)	1	1	0		grandiflora (805)	2	2	0	
caesius (3)	1	1	0		FAGUS				
caryophyllus (781)	2	2	1		fastigiata (200)	1	1	0	
-- Achievement (22)	1	1	0		sylvatica purpurea (123)	3	3	0	
-- Coral Glow (3)	1	1	0		-- -- pendula (210)	3	3	0	
-- Ditchling (3)	1	1	0		-- riversi (541)	3	3	0	
-- Gardenia (32)	1	1	0		FIcus				
-- Giant Laddie (6)	1	1	0		pandurata (1)	1	0	1	
-- Golden Wonder (3)	1	1	0		punila (repens) (100)	2	2	0	
-- Ivanhoe (18)	1	1	0		-- mandiana (10)	1	1	0	
-- Maine Sunshine (42)	1	1	0		FITTONIA				
caryophyllus Patrician (19)	1	1	0		argyroneura (10)	2	1	1	
-- Rajah (11)	1	1	0		FORSYTHIA				
-- Robt. Allwood (170)	2	2	0		ovata (100)	1	1	0	
-- White Dairy Maid (5)	1	1	0		spectabilis (100)	1	1	0	
-- Zorro (3)	1	1	0		viridissima (35)	1	1	0	
Crimson King (29)	3	3	0		FUCHSIA				
deltoides (200)	1	1	0		aurora superba (1)	1	0	1	
Etoile de Lyon (90)	1	1	0		De Henckle (1)	1	0	1	
Grenadin, white-red-pink (36)	1	1	0		Dollar Princess (1)	1	0	1	
Mrs. Sinkins (3)	2	2	0		Lustre Improved (4)	1	0	1	
Newport Pink (12)	1	1	0		Magellanica (84)	2	1	1	
Pink Beauty	2	2	0		Marinka (5)	1	0	1	
plumarius (184)	2	2	0		Mrs. Rundle (1)	1	1	0	
-- Little Jock (3)	1	1	0		Sylvia (1)	1	0	1	
Rosalie (3)	1	1	0		FRAGARIA (100)	1	1	0	
Rose unique (15)	1	1	0		Aberdeen (75)	1	1	0	
Silvermine (15)	1	1	0		Barrymore (200)	1	1	0	
DICENTRA (324)	3	3	0		Big Joe (300)	1	1	0	
Exima (81)	4	4	0		Brandywine (250)	1	1	0	
spectabilis (77)	3	3	0		Bunn Special (10)	1	1	0	
DICTAMNUS					Catskill (375)	1	1	0	
albus (13)	1	1	0		Chesapeake (2509)	1	1	0	
DIEFFENBACHIA (3)	1	1	0		Dorsett (8572)	1	1	0	
Braziliensis (84)	2	1	1		Dunlap (144)	1	1	0	
nicta (3)	2	1	1		Early Jersey Giant (250)	1	1	0	
Rudolph Roehrs (31)	1	1	0		Empire (50)	1	1	0	
DIELYTRA					Empire (all red) (50)	1	1	0	
formosa (400)	1	1	0		Fairfax (5068)	1	1	0	
DIGITALIS (582)	3	3	0		Gandy (450)	1	1	0	
alba (6)	1	1	0		Gem (175)	1	1	0	
dubia (3)	1	1	0		Gen. Dunlop (25)	1	1	0	
Giant Shirley (353)	4	4	0		Gibson (200)	1	1	0	
gloxiniaeflora (3)	2	2	0		Green Mountain (100)	1	1	0	
-- lutea (10)	1	1	0		Imperial (250)	1	1	0	
Pink (6)	2	2	0		Lupton (450)	1	1	0	
purpurea (11)	2	2	0		Marshall (860)	1	1	0	
roseum (3)	1	1	0		Mastodon (3879)	1	1	0	
Shirley (24)	4	4	0		New Perfection (100)	1	1	0	
DIPLACUS					New Washington (500)	1	1	0	
glauca (1403)	1	0	1		Premier (3031)	1	1	0	
glutinosa	1	0	1		Progressive (230)	1	1	0	
DORONICUM (38)	2	2	0						
Bunch of Gold (6)	3	3	0						
Caucasicum (10)	2	2	0						
clusi (10)	2	2	0						
excelsum (534)	4	4	0						
DRABA									
Olympica (3)	1	1	0						

	I	II	III	COMMENTS		I	II	III	COMMENTS
FRACARIA (Continued)					HEMEROCALLIS (260)	4	4	0	HEMEROCALLIS: One
Red Heart (50)	1	1	0		Ajax (52)	4	4	0	grower comments
Royal Sovereign (481)	1	1	0		Amaryllis (385)	4	4	0	"Root clumps all
Senator Dunlap (390)	1	1	0		Anna Detscher (445)	4	4	0	dormant, 50°F. All
Sharpless (125)	1	1	0		August pioneer	4	4	0	O.K. Flowering may
Wm. Belt (415)	1	1	0		Aureole (33)	4	4	0	have been retarded
FRANKLINIA					Autumn Wonder (73)	4	4	0	a little next
alataamaha (3)	2	2	0		Bagdad (100)	4	4	0	season."
GAILLARDIA (325)	4	4	0		Bardeley (36)	4	4	0	
aristata (696)	4	4	0		Bay State (440)	4	4	0	
Burgundy (3)	4	4	0		Bijou (55)	4	4	0	
Grimson Glow (25)	4	4	0		Burbank (88)	4	4	0	
Firebrand (28)	4	4	0		Calypso (440)	4	4	0	
Goblin (1089)	4	4	0		Cinnabar (593)	4	4	0	
Ipswich Beauty	4	4	0		Cissy Giuseppe (46)	4	4	0	
Mr. Sherbrook (14)	4	4	0		Cressida (271)	4	4	0	
Ruby	4	4	0		Dauntless (35)	4	4	0	
Sun God (7)	4	4	0		Dawn (120)	4	4	0	
Sunset (3)	4	4	0		Dazzler (570)	4	4	0	
GARDENIA (103)	2	2	0	GARDENIA: One lot	D. D. Wyman (900)	4	4	0	
Daisy Hill (102)	1	1	0	of forcing Gardenias	Demona	4	4	0	
veitchi (1077)	4	4	0	severely damaged,	Donald Wyman (414)	4	4	0	
GENISTA				probably because of	Dover (6)	4	4	0	
Golden Perfection (125)	2	2	0	prior oil spraying	Dr. Regel (1075)	4	4	0	
GENTIANA				within two days of	dumortieri (407)	4	4	0	
acaulis clusii (6)	2	2	0	fumigation.	Elizabeth Pyke (30)	4	4	0	
GERANIUM					Estmere (233)	4	4	0	
(see PELARGONIUM)					Flamid (208)	4	4	0	
GEUM (125)	3	3	0		flava (15)	4	4	0	
borisi	3	3	0		Flora	4	4	0	
Fire Opal (132)	4	4	0		Florian (69)	4	4	0	
Mrs. Bradshaw (10)	4	4	0		fulva (1223)	4	4	0	
Princess Juliana (9)	3	3	0		-- Kwanao (12)	4	4	0	
Red Wing	1	1	0		George Yeld (586)	4	4	0	
Wilton Ruby (2)	2	2	0		Gladys Perry (122)	4	4	0	
GINKGO					Gloriana (160)	4	4	0	
biloba (10)	1	1	0		Gold Dust (2736)	4	4	0	
fastigiata (2)	1	1	0		Golden Bell	4	4	0	
GLOXINIA					Golden Dream (232)	4	4	0	
gordonia	1	1	0		goldeni (397)	4	4	0	
GYPHOPHILA (507)	2	2	0	GYPHOPHILA: Bristol	gracilis (679)	4	4	0	
Bodgeri (406)	1	1	0	Fairy reported	gipsy (212)	4	4	0	
Bristol Fairy	6	5	1	"killed" by one	Harvest Moon (195)	4	4	0	
cerastoides (3)	2	2	0	establishment.	Helen Campbell	4	4	0	
Ehrlei	1	1	0		Hyperion (176)	4	4	0	
Flemingo	1	1	0		Imperator (402)	4	4	0	
Fortuna	1	0	1		Iris Perry (17)	4	4	0	
oldhamiana (9)	3	3	0		J. A. Crawford (526)	4	4	0	
pacifica	3	3	0		J. S. Gwynor	4	4	0	
paniculata (115)	4	4	0		Kwanso (90)	4	4	0	
-- fl. plena (1623)	3	3	0		-- Fl. Pl. (1106)	4	4	0	
pink veil	1	1	0		Lemona (375)	4	4	0	
repens (3)	3	3	0		Lemon King (297)	4	4	0	
-- Bodgeri (410)	3	3	0		Linda	4	4	0	
Rosenschlier (Rosy Veil) (513)	3	3	0		Lovett's Lemon (500)	4	4	0	
Snow White (3)	2	2	0		Lovett's Orange (500)	4	4	0	
HALESIA					Margaret Perry (28)	4	4	0	
tetraptera (25)	1	1	0		Mary Florence	4	4	0	
HAMAMELIS					Mary Stoker (35)	4	4	0	
mollis	1	1	0		Midus (30)	4	4	0	
HEDERA (3)	1	1	0		Middendorffii (584)	4	4	0	
arborescens (1)	1	1	0		Mikado (648)	4	4	0	
conglomerata	4	4	0		Minor (131)	4	4	0	
coreacea (15)	1	1	0		Modesty (233)	4	4	0	
drankieriana (5)	1	1	0		Moonstone (89)	4	4	0	
dentata (5)	1	1	0		Mrs. A. H. Austin (24)	4	4	0	
discolor (5)	1	1	0		Mrs. J. H. Mann (18)	4	4	0	
Hahn's (1)	1	1	0		Mrs. W. H. Mann (417)	4	4	0	
Hahn's S.B. (50)	3	3	0		Mulleri (175)	4	4	0	
helix (2176)	1	1	0		multiflora	4	4	0	
-- gracilis (100)	3	3	0		New Giant Orange (25)	4	4	0	
Merion Beauty (208)	3	3	0		Olif	4	4	0	
Pittsburgh (1375)	3	3	0		Ophir (86)	4	4	0	
white (720)	2	2	0		Orange King (30)	4	4	0	
HELENIUM (4)	1	1	0		Orangeman (280)	4	4	0	
bigelovi (5)	1	1	0		Pale Moon (30)	4	4	0	
Chippersfield (25)	1	1	0		Patricia (209)	4	4	0	
Gartensonne (6)	1	1	0		Queen of May (24)	4	4	0	
Moerheim	3	3	0		Radiant (50)	4	4	0	
peregrina (3)	3	3	0		Rajah (71)	4	4	0	
Riverton Beauty (1)	1	1	0		Royal hybrid (4)	4	4	0	
Riverton Gem (3)	3	3	0		seranoden	4	4	0	
rubrum (1)	1	1	0		Shekmah (32)	4	4	0	
HELIANTHEMUM					Shirley (50)	4	4	0	
Ball of Fire (5)	1	1	0		Sieboltiana (84)	4	4	0	
Double Orange (5)	1	1	0		Sir Michael Foster (183)	4	4	0	
Mrs. Earle (1)	1	1	0		Sir William (31)	4	4	0	
Rosy Gem (10)	1	1	0		Sonny (22)	4	4	0	
HELIANTHUS (30)	1	1	0		Soudan	4	4	0	
HELIOPSIS (9)	1	1	0		Sovereign (25)	4	4	0	
incomparabilis (51)	3	3	0		Sunkist (42)	4	4	0	
-- Summer Gold (3)	1	1	0		Sunny West (18)	4	4	0	
Lemoine (6)	1	1	0		Sunset (47)	4	4	0	
HELIOTROPIUM					The Gem (235)	4	4	0	
Royal Fragrance (254)	1	0	1		Thelma Perry (53)	4	4	0	
HELLEBORUS					Thunbergi (736)	4	4	0	
niger (207)	2	2	0		Tonensii (47)	4	4	0	
					Vesta	4	4	0	
					Violet Harrington	4	4	0	
					Taubun (45)	4	4	0	
					Winnie Nightingale (27)	4	4	0	
					Winsome (92)	4	4	0	
					HEUCHERA (324)	4	4	0	
					Blooms	4	4	0	
					brizoides (10)	4	4	0	
					Cascade	4	4	0	
					Coral Bell (13)	4	4	0	
					Edge Hall	4	4	0	
					Jubilee	4	4	0	
					Pale Pink (12)	4	4	0	
					Rosamunda (151)	4	4	0	
					sanguinea (15)	4	4	0	
					-- Hybrid (503)	4	4	0	
					-- Pluie de Feu	4	4	0	
					Saturnale (5)	4	4	0	

	I	II	III	COMMENTS		I	II	III	COMMENTS
LABURNUM vossi (2)	1	1	0		MARANTA Kerchoveana (47)	1	1	0	MARANTA: "Some varieties will burn."
LANTANA (2) standard (6) -- Radiation (8) -- Bien court (8)	1 2 2 2	0 0 0 0	1 2 2 2	LANTANA: Noted in one report as "OK dormant." and in another as "killed" for all varieties.	MATRICARIA Little Gem (3)	1	1	0	
LARIX europaea (5)	1	1	0		MAZUS (12)	1	1	0	
LATHYRUS albus (73) odoratus (610) latifolius (104)	1 1 1 1	1 1 1 1	0 0 0 0		MENZIESIA polifolia (1) -- alba (1)	1 1	1 1	0 0	
LAVANDULA (1) Munstead Twickel Purple (2271)	1 1 1	1 1 0	0 0 1	LAVANDULA: Report for Twickel Purple is "killed."	MERTENSIA (1) Blue (3) virginica (18)	1 1 2	1 1 2	0 0 0	
LEONTOPODIUM (6)	1	1	0		MONARDA (25) didyma (3) Lilacina (3) Salmon Queen (30) Scarlet (10)	3 3 1 2 2	3 3 1 2 2	0 0 0 0 0	
LEUCOTHOE catesbaei (52)	1	1	0		MYOSOTIS (41) palustris semp. (678) Ruth Fisher (12)	3 3 1	2 3 1	1 0 0	
LIATRIS (514) Sept. Glory (251) pycnostachya (6)	1 1 2	1 1 2	0 0 0		MYRICA cerifera (50)	1	1	0	
LIGUSTRUM flavimont ovalifolium aureum (16)	1 1	1 1	0 0		NEPETA (36) mussini (42) Six Hill Giant (301)	1 1 2	1 1 2	0 0 0	
LILIUM (17) candidum (288)	2 1	2 1	0 0		NEPHROLEPIS exaltata bostoniensis (9) Trevillion (25)	3 3	2 2	1 1	
LIMONIUM (223)	2	2	0		NIEREMBERGIA hippomaniaca (3)	1	1	0	
LINUM flavum (6) -- improved (8) perenne (32)	1 2 1 1	1 2 1 1	0 0 0 0		OENOTHERA (1) fyruekerri (1) glauca fraseri (9) illumination Yellow River (1)	1 1 1 1 1	1 1 1 1 1	0 0 0 0 0	
LIQUIDAMBAR styraciflua (79)	1	1	0		OPHIOPOGON (3) japonicus (1712)	1 1	1 1	0 0	
LIRIODENDRON tulipifera (40)	1	1	0		OSMANTHUS aquifolium (3)	1	0	1	OSMANTHUS: "Drops foliage."
LITHOSPERMUM (3)	1	1	0		OXYDENDRUM arboresum (25)	1	1	0	
LOBELIA cardinalis (3)	2	2	0		PACHYSANDRA terminalis (3342)	5	5	0	
LONICERA fragrantissima (22) hekrotti (105) japonica halliana (156) maackia podocarpa (50) tatarica alba (50) -- rubra (10)	1 1 2 2 2 1	1 1 2 2 2 1	0 0 0 0 0 0		PAEONIA festiva maxima (212) Karl Rosenfeld (514) Pink Double (2) Red Double (?) White Double (2)	1 1 1 1 1	1 1 1 1 1	0 0 0 0 0	
LUPINUS (101) atropurpureus (3) blue (3) carmineus (3) Dark Blue Dark Eyes Dark Blue Light Eyes (2) Light Blue Dark Eyes (2) Luteus (3) Mauve pink (3) polyphyllus (8) -- blue (4) -- moerheimi (8) -- pink (4) -- white (4) Russell (21) -- Super. (12)	2 2 2 2 2 2 2 2 2 2 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1	1 1 0 1	1 1	LUPINUS: "The foliage burned or wilted badly but they came out of it all right."	PANDANUS florida (1) veitchii (2)	1 1	0 0	1 1	
LYCHNIS (109) viscaria (6)	2 2	3 2	0 0		PAPAVER (1035) Beauty of Livermore Golden Wonder (5) Iceland (1) Lady Moore Mrs. Perry (1761) nudicaule (8) -- Coonara Pink -- Sunbeam (1) Olympia (852) orientale (15) -- cerise Beauty (1) -- Jean Harrison (6) -- Royal Scarlet Perry White (278)	2 2 2 1	3 3 3 1	0 0	
LYCIUM barbatum (225)	1	1	0		PELAGONIUM Buckner (2) Enchantress Fiat (502) Graveolens (3) ibericum (3) -- platypetalum (3) Olympic (1008) Palmer-Salmon Supreme (252) Pink Fiat Red Fiat (505)	1 1	1 1 0 1	0 0 1 0	
LYSIACHIA ciliata (8)	1	1	0		PENTSTEMON (25) barbatus torreyi (3) Ben's Beauty Blue Gem (64)	1 2 1 1	1 2 1 1	0 0 0 0	
LYTHRUM (6) salicaria (10)	1 1	1 1	0 0		PEPEROMIA obtusifolia (19) silver leaf (3) variegated (1)	2 1 1	2 1 1	0 0 0	
MAGNOLIA (4) grandiflora (1) halleana stellata (50) -- rosea (35) lennei (5) soulangiana (412) -- nigra (11) stellata (34) -- rosea (13)	1 1 2 2 1 4 3 3 1 1 1	1 1 2 2 1 4 3 3 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0		PETUNIA gardenia (12) Mrs. DuPont	1 1	1 0	0 1	
MALUS arnoldiana (25) atrosanguinea (1) Banana-Rocksbury Russett (3) Delicious Yellow Trans. (2) floribunda (1) loensis Bechteli (3) scheideckeri spectabilis (15) Winesap (1)	2 1 1 1 1 1 2 2 1 1 1	2 1 1 1 1 1 2 2 1 1 1	0 0 0 0 0 0 0 0 0 0 0	MALUS: Occasional slight tip burn noted. This may be avoided by spraying tops with water before treatment.	PHILADELPHUS avalanche (115) coronarius (125) virginaria (50) voie lactee (25)	1 2 1 1	1 2 1 1	0 0 0 0	
MALVA (458)	1	1	0						

	I	II	III	COMMENTS		I	II	III	COMMENTS
PHILODENDRON					PHLOX (Continued)				
cordatum (53)	3	0	3		--Nivalis	3	3	0	
dubia (2)	1	1	1		-- sampson (350)	1	1	0	
pertusum (7)	2	0	2		-- snow white (418)	1	1	0	
PHLOX (11583)	6	6	0		-- starlight (430)	1	1	0	
Al. L. Schlageter (52)	1	1	0		-- vivid	1	1	0	
amoena (9)	1	1	0		sunshine (64)	3	3	0	
Augusta (4)	1	1	0		The Queen	3	3	0	
Baron von Dedem (45)	1	1	0		Thor (32)	3	3	0	
B. Comte (red) (287)	1	1	0		V. G. Van Lassburg (83)	3	3	0	
Beacon (125)	1	1	0		Wider (22)	1	1	0	
Betty Lou (10)	1	1	0		Windot (82)	1	1	0	
Blue Gem (12)	1	1	0		Wm. Kesserling (75)	3	3	0	
Border Gem (82)	1	1	0		PHOENIX				
Border Queen	1	1	0		roebolini (9)	2	2	0	
Break O' Morn (250)	1	1	0		PHYSALIS				
Brilliant (35)	1	1	0		Chinese Lantern (25)	1	1	0	
Camille Schneider (8)	1	1	0		PHYSOSTEGIA (78)				
Camila (3)	1	1	0		alba	3	3	0	
Camlaensis (27)	1	1	0		grandiflora vivida	2	2	0	
Caroline Vandenburg (48)	1	1	0		Summer Snow (25)	3	3	0	
Chas. Door (15)	1	1	0		virginica	3	3	0	
Columbia (9)	1	1	0		vivida (27)	2	2	0	
Commander (15)	1	1	0		PICEA				
Count Zeppelin (14)	1	1	0		alba (550)	1	1	0	
Daily Sketch (34)	1	1	0		alcockiana (100)	3	1	1	
decussata (15)	3	3	0		canadensis (150)	3	3	1	
-- Annette (50)	1	1	0		conica glauca (104)	3	3	1	
-- Bridesmaid (6)	1	1	0		engelmanni (113)	4	3	0	
-- Colorado (25)	1	1	0		excelsa (4700)	1	1	0	
-- Elizabeth Campbell (10)	1	1	0		orientalis (100)	1	1	0	
-- Rhinelander	1	1	0		pendula (10)	1	1	0	
-- Silverton (50)	1	1	0		pungens (3050)	2	2	0	
-- Tigress (50)	1	1	0		-- glauca (140)	1	1	0	
divaricata (340)	1	1	0		-- moerheimi (689)	1	1	0	
-- canadensis (3)	1	1	0		-- kosteriana (121)	3	0	5	
-- Laphami (33)	1	1	0		-- moerheimi (255)	3	2	1	
E. I. Farrington (100)	1	1	0		PIERIS				
Eifel Tower (108)	1	1	0		floribunda (10)	1	1	0	
Emain Macha (5)	1	1	0		japonica (7)	2	2	0	
enchantress (10)	1	1	0		PIRUS				
Ethel Pritchard	1	1	0		austriaca (1110)	2	2	0	
Europa (250)	1	1	0		bungeana (9)	1	1	0	
Eva Foerster	1	1	0		densiflora (5)	1	1	0	
Fire Brand (2)	1	1	0		flexilis (3)	1	1	0	
Flanders	1	1	0		mughus (2100)	3	3	0	
Flora Reidy (75)	1	1	0		nigra (110)	1	1	0	
France	1	1	0		strobilus (525)	2	2	0	
Frau Anton Buchner (83)	1	1	0		syvestris (100)	1	1	0	
General Petain (75)	1	1	0		thunbergi (3)	1	1	0	
Geo. Stipp (51)	1	1	0		wateriana glauca (30)	1	1	0	
Glenwood (100)	1	1	0		PLATYCODON (110)				
Glory	1	1	0		Blue (74)	2	2	0	
Gustav Lind	1	1	0		grandiflorum (52)	3	3	0	
Harvest Fire	1	1	0		mariesii (3)	2	2	0	
Hauptman Koehl (15)	1	1	0		White (197)	2	2	0	
H. B. May (47)	1	1	0		PLUMBAGO				
Hindenburg	1	1	0		coccinea (110)	2	2	0	
Jules Sandeau (17)	1	1	0		larpentae (161)	4	4	0	
Karl Foerster	1	1	0		POINSETTIA				
Lassburg	1	1	0		Barbara Ecke (2)	2	0	3	
Late Red	1	1	0		Ers. Paul Ecke (5)	3	1	1	
La Vagne (35)	1	1	0		Oak Leaf (585)	3	0	2	
Lavender (75)	1	1	0		Paul Ecke	2	0	2	
Leo Schlageter (100)	1	1	0		Ruth Ecke	2	0	2	
Lila Konigin	1	1	0		POLEMONIUM				
Lillian (305)	1	1	0		Blue Pearl (11)	3	3	0	
Maid Marion (150)	1	1	0		caeruleum (15)	2	2	0	
Margaret Jones (3)	1	1	0		humile album (10)	2	2	0	
Marshall French	1	1	0		POLYGONUM				
Mary Louise	1	1	0		auberti (993)	3	3	0	
Mia Ruys	1	1	0		POTENTILLA (3)				
Milly V. Hoboken (12)	1	1	0		fruticosa (30)	1	1	0	
Miss Lingard (15)	1	1	0		tridinalata (3)	1	1	0	
Miss Virboom	1	1	0		vera nana (10)	1	1	0	
moerheimi (12)	1	1	0		Willmott (6)	1	1	0	
morgenrood (212)	1	1	0		POTERIUM (40)				
Mrs. Sam McGredy	1	1	0		obtusum (3)	1	1	0	
Mrs. Scholton (33)	1	1	0		PRIMULA (188)				
Mrs. W. G. Harding	1	1	0		abeonies (50)	4	4	0	
Mrs. Wm. Jenkins (47)	1	1	0		acaulis (56)	1	1	0	
Mrs. Wm. Perkins (12)	1	1	0		-- fl. pl. (3)	3	3	0	
Newbird	1	1	0		auricula	2	2	0	
Painted Lady (492)	1	1	0		-- purple (1)	1	1	0	
Pantheon (75)	1	1	0		Blue Shades (6)	2	2	0	
P. D. Williams	1	1	0		Beesiana (1)	1	1	0	
pink (75)	1	1	0		Cashmeriana (97)	1	1	0	
Pink Giant (70)	1	1	0		chinensis (510)	1	1	0	
Princess Ingrid (60)	1	1	0		dawkins (50)	1	1	0	
Princess Juliana (122)	1	1	0		Fasbender (25)	1	1	0	
Richard Wallace (137)	1	1	0		malacoides (990)	2	1	1	
Rokoko (29)	1	1	0		obconica (1984)	1	1	0	
Ronsdorfer	1	1	0		-- blue (25)	1	1	0	
rosalinda	1	1	0		-- Friesdorfer (50)	1	1	0	
rosenbery	1	1	0		-- grandiflora (25)	1	1	0	
rosenkavalier (134)	1	1	0		-- lilac (25)	1	1	0	
R. P. Struthers (35)	1	1	0		-- mohnstein (200)	1	1	0	
Salmon Glow	1	1	0		-- Mueller-Rosea (150)	1	1	0	
Salmon Pink	1	1	0						
Samson (200)	1	1	0						
San Antonia (9)	1	1	0						
Scarlet Glow	1	1	0						
Severganadis (2)	1	1	0						
Snow Sprite (35)	1	1	0						
Snow White (200)	1	1	0						
subulata (3)	1	1	0						
-- alba (73)	1	1	0						
-- apple blossom (6)	1	1	0						
-- blue hill (384)	1	1	0						
-- Brittoni (3)	1	1	0						
-- emerald cushion	1	1	0						

PICEA: Injury to lining out stock appears to be rare. On the other hand, most, if not all B&P units of this entire group have been either severely injured or killed.

POINSETTIA: "Possibility that injury is due to constant air current from fan in chamber."

POLYGONUM: At least two of the reports are for plants when dormant

The injury to PRIMULA malacoides is recorded as "slight burning."

	I	II	III	COMMENTS		I	II	III	COMMENTS
PRIMULA (Continued)					RHODODENDRON (continued)				
variegated (12)	1	1	0		Nova Zembla (51)	2	2	0	
veris (89)	2	2	0		Old Port (7)	2	2	0	
-- Munstead Giant (12)	3	3	0		Parsons Gloriosa (14)	2	2	0	
-- (mums yellow) (4)	1	1	0		Parsons Grandiflora (71)	2	2	0	
-- duplex (13)	1	1	0		Pierre Maison (1)	1	1	0	
vulgaris (378)	1	1	0		Pink Perfection (1)	1	1	0	
PRUNUS					Pres. Lincoln (24)	4	4	0	
glandulosa (4)	1	1	0		Prof. Better (2)	2	2	0	
-- alba (55)	1	1	0		purpureum (4)	1	1	0	
-- pink (140)	1	1	0		-- elegans (28)	2	2	0	
-- rosea plena (190)	1	1	0		-- grandiflorum (2)	1	1	0	
triloba (10)	1	1	0		Robert Crouse (1)	1	1	0	
weeping cherries (4)	1	1	0		racemosa (100)	1	1	0	
PSEUDOTSUGA					roseum elegans (341)	4	4	0	
DOUGLASSI (370)	2	2	0		-- English (2)	1	1	0	
PTERIS					-- grandiflorum (1)	1	1	0	
tremula (1010)	2	2	0		-- pink elegans (5)	2	2	0	
PUERARIA (492)	1	1	0		-- superbum (3)	2	2	0	
thunbergiana (517)	1	1	0		Sappho (1)	1	1	0	
PULMONARIA (6)	2	2	0		Stanley Davis (1)	1	1	0	
longwort (1)	1	1	0		Sultana (1)	1	1	0	
PYRACANTHA (4)	1	1	0		Vander Brocke (10)	2	2	0	
coccinea (2)	1	1	0		Van Weerden Poelman (11)	2	2	0	
-- lalandi (13)	1	1	0		William Austin (1)	1	1	0	
PYRETHRUM (667)	4	4	0		RHODOTYPOS				
Brilliant (11)	3	3	1		kerriodes (960)	2	2	0	
Buckeye (12)	3	3	1		RHUBARB = RHEUM (7191)	1	1	0	RHUBARB: Rapid pre-
hybrids (970)	3	3	1		Lenniaus (6,000)	1	1	0	heating of dormant
Lady Dawn (3)	1	1	0		MacDonald (9452)	1	1	0	roots may cause in-
Lady Garnet (1)	1	1	0		Myatta (170)	1	1	0	jury.
Lord Roseberry (4)	1	1	0		Victoria (10050)	1	1	0	
Miami Queen (5)	2	1	1		RHUS				
Purity (1)	1	1	0		canadensis (25)	1	1	0	
roseum (19)	1	1	0		ROSA (175)	1	1	0	The information on
sylvia (3)	1	1	0		Better Times (1294)	3	3	0	ROSA is confusing.
-- double (2)	1	1	0		Betty Prior (2)	2	2	0	Comments received in-
viliginosum (1)	1	1	0		Briercliff (47)	1	1	0	clude the following:
QUERCUS					Cecil Brunner (75)	1	1	0	"Two year old field
macrocarpa (60)	1	1	0		Countess Vandal (1)	1	1	0	grown roses when
palustris (240)	1	1	0		Double Killarney (12)	1	1	0	pot and growing
RHODODENDRON					Excelsa (25)	1	1	0	went through success-
Abraham Lincoln	2	2	0	RHODODENDRON: One	Francis Scott Key (1)	1	1	0	fully. Grafted roses
Adalbert (1)	4	4	0	grower comments,	Golden Charm (20)	1	1	0	go through fairly
album elegans (172)	4	4	0	"O.K. only dormant."	Golden Dawn (1)	1	1	0	well. Young growth
-- novum (56)	3	3	0		Golden Rapture (35)	1	1	0	may burn a little but
Alexander Aide (1)	3	3	0		Gorgeous (1)	1	1	0	not too badly." "Pot
America (11)	3	3	0		Grand Canary (100)	1	1	0	grown growing roses
amphion (23)	3	3	0		Happy Days (20)	1	1	0	are killed. Pot grown
atrosanguinea (12)	3	3	0		Hugonis (1)	1	1	0	dormant roses are O.K."
B. De Bruin (1)	3	3	0		Imperial Potentate (2)	1	1	0	
Blandvanum (1)	3	3	0		Innocence (3)	1	1	0	
Boule de Neige (98)	3	3	0		Leonard Chambard (2)	1	1	0	
caractacus (59)	3	3	0		Lucille Hill (4)	1	1	0	
carolinianum (1561)	3	3	0		Lums White (49)	1	1	0	
-- album (2)	3	3	0		Madame Chambard (1)	1	1	0	
catawbiense (521)	3	3	0		McGredys Scarlet (3)	1	1	0	
-- album (168)	3	3	0		Mme. Butterfly (546)	1	1	0	
-- grandiflorum (136)	3	3	0		Pres. Hoover (40)	1	1	0	
Chas. Bagley (13)	3	3	0		Queen Mary (114)	1	1	0	
Chas. Dickens (39)	3	3	0		Rapture (120)	1	1	0	
C. S. Sargent (3)	3	3	0		Red Radiance (12)	1	1	0	
Cunningham White (1)	3	3	0		R.M.S. Queen Mary (1)	1	1	0	
delicatissima (31)	3	3	0		rouletti (7)	1	1	0	
Dr. H. C. Dresselhuys (335)	3	3	0		Rugosa (1000)	1	1	0	
Dr. H. J. Lovink	3	3	0		Schorcher (10)	1	1	0	
Dr. Rutgers (14)	3	3	0		Senior (2)	1	1	0	
Duchess of Edinburg (1)	3	3	0		Signet (2)	1	1	0	
E. S. Rand (14)	3	3	0		Springtime (3)	1	1	0	
everestianum (64)	3	3	0		Sunny Day (1)	1	1	0	
F. D. Godman (4)	3	3	0		Token (51)	1	1	0	
F. L. Ames (1)	3	3	0		White Killarney (12)	1	1	0	
Frederick Waterer (1)	3	3	0		Yellow Gloria (119)	1	1	0	
General Grant (51)	3	3	0		ROSMARINUS				
giganteum (56)	3	3	0		officinalis (40)	2	2	0	
Glory De Boshop (1)	3	3	0		RUBECKIA (44)	4	4	0	
Goldsworth Yellow (1)	3	3	0		Autumn Forest (1)	1	1	0	
Gomer Waterer (1)	3	3	0		Hirta (30)	1	1	0	
Henrietta Sargent (5)	3	3	0		-- hybrid (12)	2	2	0	
H. K. Hunnewell	3	3	0		King	1	1	0	
Horsham (1)	3	3	0		purpurea (153)	4	4	0	
Hugo Koster (1)	3	3	0		SALIX				
H. W. Sargent	3	3	0		babylonica (100)	1	1	0	
Ignatius Sargent (187)	3	3	0		caprea (80)	1	1	0	
James MacIntosh (1)	3	3	0		SALVIA (8)	1	1	0	
John Walter (2)	3	3	0		azurea	1	1	0	
Kate Waterer	3	3	0		Blue Bedder (1524)	3	3	0	SALVIA: Several of the
Kettledrum (69)	3	3	0		Hirta (3)	2	2	0	records for success-
Lady Annette Trafford (1)	3	3	0		officinalis (25)	1	1	0	ful treatment involve
Lady Clermont	3	3	0		pratensis (1)	1	1	0	dormant plants.
Lady Grey Egerton (2)	3	3	0		pitcheri (568)	4	4	0	
Lee's Dark Purple (35)	3	3	0		Vandenberg (5)	1	1	0	
Lord Roberts (52)	3	3	0		virgata memorosa (115)	2	2	0	
Mme. Carvalho	3	3	0		SANSEVIERIA (3)	1	1	0	
Mme. De Bruin	3	3	0		laurenti (21)	1	1	0	
Mme. Masson	3	3	0		SANTOLINA				
maximum (52)	3	3	0		incana (512)	2	2	0	
Monsieurs Theirs (1)	3	3	0		pinnata (12)	2	2	0	
Mrs. C. S. Sargent (621)	3	3	0		SAXIFRAGA (27)	2	2	0	
Mrs. E. C. Sterling (1)	3	3	0		aizoon (10)	1	1	0	
Mrs. J. H. Van Nes (1)	3	3	0		sarmentosa (10)	1	1	0	
Mrs. John Willars (1)	3	3	0		SCABIOSA (127)	1	1	0	
Mrs. John Waterer	3	3	0		alba (127)	1	1	0	
Mrs. Milner	2	2	0						
Mrs. P. Den Ouden (4)	1	1	0						
Mrs. W. H. Gaze (51)	1	1	0						

	I	II	III	COMMENTS
SCABIOSA (Continued)				
caucasica (959)	2	2	0	
-- Giant Blue (66)	1	1	0	
-- goldingensis (3)	1	1	0	
SCIADOPITYS				
verticillata (169)	2	2	0	
SEDUM (129)				
Adolphii (3)	3	3	0	
Ewensii	1	0	1	
kamtschaticum (1225)	1	1	0	
middendorffianum (1)	1	1	0	
sieboldi (9)	2	2	0	
variegata (1224)	1	1	0	
SELAGINELLA (9)				
brownii (2)	1	1	0	
caulescens (1)	2	1	0	
emmeliana (4)	2	1	1	
SEMPERVIVUM (6)				
alpha (1)	3	3	0	
beta (1)	1	1	0	
californicum (3)	1	1	0	
globiferum	2	2	0	
tectorum (3)	1	1	0	
SIDALCEA				
rosea (3)	1	1	0	
Rosy Gem (9)	1	1	0	
SPIRAEA (Including ASTILBE) (5353)	5	5	0	Since this list was
America (1122)	1	1	0	originally compiled
Amethyst (25)	1	1	0	one grower reports:
Anthony Waterer (275)	2	2	0	"We have treated
Avalanche	1	1	0	60,000 ASTILBE, all
Betsy Cuperius	1	1	0	successfully."
Bonn (1000)	2	2	0	
Brunhilde	1	1	0	
Davidi	1	1	0	
Deutschland (2050)	4	4	0	
Fanal (10)	2	2	0	
filipendula (3)	1	1	0	
Froebeli (10)	1	1	0	
japonica albiflora (25)	1	1	0	
gladstone (8600)	3	3	0	
Gloria Superba (4000)	2	2	0	
Granat (1169)	1	1	0	
Moerheimi (100)	4	4	0	
Peach Blossom (3873)	2	2	0	
Pink Pearl (860)	1	1	0	
Prof. Van der Willan	1	1	0	
prunifolia (600)	1	1	0	
-- flora plena (250)	4	4	0	
Queen Alexandria (940)	1	1	0	
reevesiana flora plena (250)	2	2	0	
Rhineland (1750)	2	2	0	
Salmon Queen (300)	2	2	0	
thunbergi (25)	1	1	0	
trichocarpa (20)	1	1	0	
ulmaria (3)	1	1	0	
Van Houtte (100)	1	1	0	
venusta (3)	1	1	0	
-- magnifica (3)	1	1	0	
White Gloria (150)	2	2	0	
SAINTPAULIA				
Blue Boy (148)	4	3	1	
STACHYS (3)	1	1	0	
STATICE (301)				
Bis Ruby (173)	2	2	0	
Caespitoso (8)	1	1	0	
cephalotes (6)	1	1	0	
Formosa	2	2	0	
latifolia	2	2	0	
Laucheana (276)	2	2	0	
rubra (281)	1	1	0	
STEPHANANDRA				
flexuosa (50)	1	1	0	
STOKESIA (25)				
alba (710)	2	2	0	
aster (12)	1	1	0	
blue (1062)	2	2	0	
blue moon (10)	1	1	0	
laevis alba (12)	2	2	0	
-- cyanea (259)	3	3	0	
STRELITZIA				
reginea (2)	1	0	1	
SYMPHORICARPOS				
Chenaulti (30)	2	2	0	
racemosus (75)	2	2	0	
SYRINGA				
Charles 10th (40)	1	1	0	
Mme. C. Perier (100)	1	1	0	
Mixed hybrids (1045)	1	1	0	
vulgaris (100)	1	1	0	
TAMARIX				
Summer Glow (250)	1	1	0	
TARRAGON	2	2	0	
TAXUS				
brevifolia (4)	2	2	0	Injury to several
cuspidata (2403)	6	6	3	varieties of E+B TAXUS
-- aurescens (1)	1	1	0	has been severe. The
-- capitata (3865)	8	6	2	list probably includes

	I	II	III	COMMENTS
TAXUS (Continued)				
-- media (2)	2	2	0	still other varie-
-- nana (552)	2	2	0	ties than those re-
hatfieldi (203)	2	2	0	corded. Lining out
Hicksi (975)	6	6	3	stock makes up the
intermedia (303)	6	5	1	bulk of the records
Kelseyi (200)	1	1	0	for successful treat-
Vermuelen (200)	1	1	0	ment. Injury is most
TEUCRIUM (700)				severe while the plants
chamaedrys (936)	3	3	0	are in active growth.
THALICTRUM				
agilegifolium (27)	3	3	0	
Dipterocarpum (7)	2	2	0	
Glaucum (2)	1	1	0	
THERMOPSIS (54)				
Caroliniana (275)	1	1	0	
THUJA (4)				
compacta (352)	1	1	0	
elegans (50)	3	3	0	The comments for
Elegantissima (156)	1	1	0	TAXUS apply likewise
occidentalis (3352)	4	4	0	to THUJA.
-- ericoides (2)	1	1	0	
-- fastigiata (2)	1	1	0	
-- globosa (438)	5	4	1	
-- hoveyi (350)	2	2	0	
occidentalis Little Gem (100)	1	1	0	
-- pendula (2)	1	1	0	
-- pyramidalis (1088)	5	2	3	
-- rosenthalii (141)	1	1	0	
-- variegata (2)	2	2	0	
-- wareana (52)	3	3	0	
-- Woodwardi (100)	2	2	0	
orientalis (32000)	5	2	3	
-- aurea nana (176)	1	1	0	
-- Bonita (100)	1	1	0	
-- Bakeri (50)	1	0	1	
recurva nana (20)	1	1	0	
THYMUS				
Cit. Argentens (544)	1	1	0	
-- Aurens (160)	1	1	0	
serpyllum albus (13)	3	3	0	
vulgaris	1	1	0	
TRADESCANTIA				
fluminensis (3)	1	1	0	
TRITOMA				
rufa (3025)	2	2	0	
TROLLIUS (10)				
eleanor (9)	1	1	0	
europaeus (8)	2	2	0	
-- hybrid (102)	1	1	0	
Golden Queen (25)	3	3	0	
TSUGA (203)				
canadensis (16649)	1	1	0	The comments for
sargentii (604)	5	4	1	TAXUS probably also
seiboldi (50)	3	3	0	apply for TSUGA.
VACCINIUM				
corymbosum (20)	1	1	0	
VALERIANA				
officinalis (366)	1	1	0	
VERBENA (373)				
Alpina (3)	1	1	0	VERBENA: Report for
lavender (3)	1	1	0	lemon is "Killed."
lemon (6)	1	0	1	
Peruviana (2)	1	1	0	
Red (3)	1	1	0	
VERONICA (393)				
Amethystiana (3)	3	3	0	
Blue Spire	1	1	0	
Erica Blue (3)	4	4	0	
-- Pink (2)	1	1	0	
Incana (13)	1	1	0	
longifolia (43)	3	3	0	
-- subsessilis (18)	4	4	0	
Lyalli (5)	1	1	0	
Nummularia (5)	1	1	0	
Royal Blue	1	1	0	
Rupestris (3)	1	1	0	
spicata (9)	1	1	0	
True Blue (3)	2	2	0	
Variegated (40)	1	1	0	
VIBURNUM				
americanum (150)	1	1	0	
bitchuiense (100)	1	1	0	
Burkwoodi (3)	1	1	0	
Carlesi (151)	4	4	0	
dilatatum (1)	1	1	0	
lentago (20)	1	1	0	
opulus (125)	1	1	0	
-- sterile (410)	1	1	0	
plicatum (605)	1	1	0	
prunifolium (50)	1	1	0	
sieboldi (260)	1	1	0	
tomentosum (25)	1	1	0	
wrightii (10)	1	1	0	
VINCA (136)				
Alpine (1)	1	1	0	
minor (24)	1	1	0	
-- bowles var. (486)	3	3	0	
variegated (558)	3	3	0	

